NOTICE

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The hardware, firmware, or software described in this manual is subject to change without notice.
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Enterasys Networks, Inc.
35 Industrial Way
Rochester, NH 03866-5005

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FCC NOTICE

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
NOTE: This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment uses, generates, and can radiate radio frequency energy and if not installed in accordance with the operator's manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense.
WARNING: Changes or modifications made to this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

INDUSTRY CANADA NOTICE

This digital apparatus does not exceed the class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.
Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

VCCI NOTICE

This is a class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

この装置は，情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

CLASS A ITE NOTICE

WARNING: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

DECLARATION OF CONFORMITY

Application of Council Directive(s):	**89/336/EEC** **73/23/EEC**
Manufacturer's Name:	**Enterasys Networks, Inc.**
Manufacturer's Address:	**35 Industrial Way** **PO Box 5005** **Rochester, NH 03867**
European Representative Name:	**Mr. Jim Sims**
European Representative Address:	**Enterasys Networks Ltd.** **Nexus House, Newbury Business Park** **London Road, Newbury** **Berkshire RG14 2PZ, England**
Conformance to Directive(s)/ Product Standards:	**EC Directive 89/336/EEC** **EC Directive 73/23/EEC** **EN 55022** **EN 55024** **EN 60950** **EN 60825**
Equipment Type/Environment:	**Networking Equipment, for use in a Commercial or Light Industrial Environment.**

Enterasys Networks, Inc. declares that the equipment packaged with this notice conforms to the above directives.

AGENCY STANDARDS

Safety

Meets the requirements of UL 1950, CSA C22.2 No. 950, EN 60950, IEC 950, 73/23/EEC, and EN 60825.

Electromagnetic Compatibility

Compliant with the requirements of FCC Part 15, CSA C108.8, EN 55022, EN 61000-3-2, EN 61000-3-3, VCCI V-3, EN 55024, 89/336/EEC, and AS/NZS 3548.

ER16-SERC-04-AA

The ER16-SERC-04-AA Serial card provides wide area connectivity via 4 T1/E1 ports with compression. These ports have the same switching and routing capabilities as those provided by the ethernet line cards. The ports can switch at Layer-2, Layer-3, and Layer-4, and perform both destination-based and flow-based switching. All ports are capable of bridging at Layer-2, switching IP/IPX frames at Layer-3, and switching on Layer-4 flows.

SPECIFICATIONS

Ports

4 Serial ports with compression (up to 8MB per port)

ASIC Type

-AA (Advanced ASIC)
DMAC, IPP, OPP

Network Interfaces

60-Pin D-shell supporting 2 serial ports per connector

Physical Dimensions

Size: 52.9 cm H x 2.9 W x 40.1 D (20.9 in. H x 1.15 W x 15.8 D)
Weight: 2.72 kg (6.0 lbs)

Power Consumption

BTU/hr = 146.35
AC Volt Amps = 43.31

Temperature

Operating: 32° to 104° F (0° to 40° C)
Storage: -22° to 194° F (-30° to 90° C)

Humidity

5% to 95% (non-condensing)

CONNECTIVITY GUIDELINES

Table 1 Recommended Cable Types and Specifications

Cable	Type	Max. Length	Connector
Serial	V.35, EIA-530, EIA-449, X.21		60-Pin D-Shell

LEDs

Table 2 LED Indicators

LED	Condition	Status
Online (2)	Green	The unit is operational and functioning properly.
Offline (2)	Amber	The unit is not operational. You may remove the unit from the chassis.
Tx (4)	Amber	A frame was transmitted.
Rx (4)	Amber	A frame was received.
Link (4)	Green	A valid link is established on the port.

INSTALLING THE MODULE

ELECTRICAL HAZARD: Only qualified personnel should perform installation procedures.

Handling the Module

CAUTION: The ER16-SERC-04-AA is easily damaged by electrostatic discharge.

To prevent electrostatic damage, observe the following guidelines:

- Do not remove the module from its packaging until you are ready to install it.
- Do not touch any of the module's pins, connectors or components.
- Hold the module only by its edges or front panel.
- Wear an anti-static wristband connected to a suitable earth ground whenever handling the module.
- Store or transport this module only in appropriate anti-static packaging.

Equipment Checklist

After unpacking the ER16-SERC-04-AA, check the contents of the box to be sure you received the following items:

- One ER16-SERC-04-AA module in anti-static bag
- One disposable anti-static wristband

Tools

This installation requires the following tool:

Anti-static wristband

Flathead screwdriver

Preliminary Setup

Firmware Image Requirements

Version 8.3.0.0 or later.

CLI Setup

Enter the following command at the CLI before implementing any configurations.

1. Type the following from Enable mode to enter Configuration mode
   Enable -> Configure #
2. You may now begin configuring ports on the ER16-SERC-04-AA. Refer to the *Enterasys X-Pedition Command Line Interface Reference Manual* for details.

Hotswap

You may *install* this module into a live system without powering off the device. However, you may not *remove* an active module from a live system except under the following conditions:

- Press the **Hotswap button**. The **Online LED** will turn **off** and the **Offline LED** will turn **on**.

OR...

- Enter the following from the CLI and click enter: **Enable -> System -> Hotswap -> Out -> Slot -> #**. The **Online LED** will turn **off** and the **Offline LED** will turn **on**.

Instructions

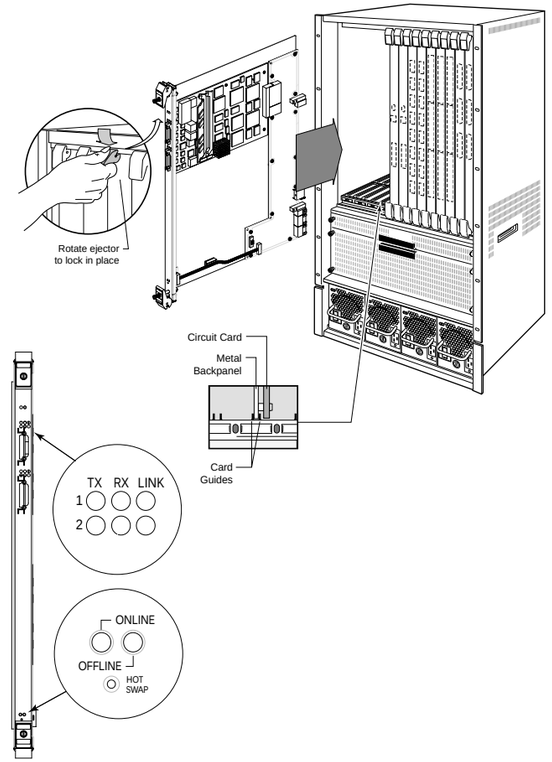
CAUTION: Before performing any upgrade or installation, ensure that you are properly "grounded" to avoid electrostatic discharge. The switch must be powered off before installing or replacing any module.

1. If a coverplate is installed in the slot where you will install the ER16-SERC-04-AA, **remove the coverplate**: loosen the screws on the ejectors until the screws pop out, then open the ejectors and pull out the plate.
2. **Open the ejectors** at the top and bottom of the ER16-SERC-04-AA.
3. **Align the metal backpanel with the card guides** at the top and the bottom of the slot opening, as shown in Figure 1.

NOTE: Make sure that the metal backpanel of the ER16-SERC-04-AA—not the circuit card—is between the card guides. Check both the upper and lower tracks.

4. **Slide the ER16-SERC-04-AA all the way into the slot**, firmly but gently pressing to ensure that the pins on the back of the module are completely seated in the backplane.
5. To lock the ER16-SERC-04-AA into the slot, **close the ejectors**. Using a flathead screwdriver, tighten the screw on each ejector.

Figure 1 Install the ER16-SERC-04-AA



TROUBLESHOOTING

Proper Boot Sequence

- Firmware loads.
- The control module for the chassis should indicate that the ER16-SERC-04-AA was detected and is operating correctly.
- The Online LED will turn on and remain lit (no other LEDs should illuminate during module power-up).

Common Errors

- The ER16-SERC-04-AA is not inserted properly or seated completely in the chassis
- Connectors for the connected lines are not seated properly.

Helpful CLI Commands for Debugging

- **System show hardware**
- **System show version**
- **Port show port status se.x.y** (where **x** is the chassis slot that contains the line card and **y** is a specific port number on the card).
- **System show bootlog**

ADDITIONAL INFORMATION

For additional information about installing this module or to learn more about what capabilities are included in the firmware release you are using, visit the Enterasys Networks web site.

Getting Help

For additional support related to the Common CLI syntax or this document, contact Enterasys Networks using one of the following methods:

World Wide Web	http://www.enterasys.com/
Phone	(603) 332-9400
Internet mail	support@enterasys.com
FTP **Login** **Password**	ftp://ftp.enterasys.com anonymous your email address
To acquire the latest image for this product and any available release notes	http://www.enterasys.com/download
Additional documentation	http://www.enterasys.com/support/manuals

To send comments or suggestions concerning this document, contact the Technical Writing Department via the following email address:
TechWriting@enterasys.com
Please include the document Part Number in the email message.

Before contacting Enterasys Networks for technical support, have the following information ready:

- Your Enterasys Networks service contract number
- A description of the failure
- A description of any action(s) taken to resolve the problem (e.g., changing mode switches, rebooting the unit)
- The serial and revision numbers of all involved Enterasys Networks products in the network
- A description of your network environment (layout, cable type, etc.)
- Network load and frame size at the time of trouble (if known)

ER16-SERC-04-AA

Quick Start

Web Site: http://www.enterasys.com/

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